

CLAIMS

- SUB B2
1. **Switched power supply converter for broad range of input voltages** that comprises a first stage (11) which converts a first voltage supplied from a voltage source into a second voltage by means of a first switching element (11-3) and a second stage (21) that receives the second voltage and transforms it into a third DC voltage, a first control circuit (11-9) controls the duty cycle of the first switching element (11-3) so that the duty cycle varies between a first limit of the duty cycle and a second limit of the duty cycle; characterised in that the first control circuit (11-9) is adapted to fix the duty cycle at the first limit of the duty cycle or at the second limit of the duty cycle in the event that the first voltage is outside a predetermined range of voltage values.
 2. **Switched power supply converter** according to claim 1, characterised in that the first control circuit (11-9) is adapted to receive a sample of the second voltage.
 3. **Switched power supply converter** according to claim 1, characterised in that the first stage (11) is implemented according to a conversion topology without galvanic isolation.
 4. **Switched power supply converter** according to claim 1, characterised in that the second stage (21) is implemented according to a conversion topology with galvanic isolation.
 5. **Switched power supply converter** according to claim 5, characterised in that the second stage (21) comprises a transformer (T) with a predetermined number of secondary windings that configure a predetermined number of outputs of the switched power supply converter, respectively.
 6. **Switched power supply converter** according to claim 6, characterised in that the second stage (21) comprises a second control circuit that is adapted to receive a sample of the third voltage and regulates the third voltage.
 7. **Switched power supply converter** according to any of claims 1 and 6, characterised in that the first control circuit and the second control circuit are independent.
- SUB A1